

## Abstract of the Disclosure

### AUTOMATED MACHINE COMPONENT DESIGN TOOL

A system and method for designing a machine component is provided. A plurality of requirements associated with the machine component are established. A component layout is automatically established in response to the plurality of requirements. The component layout is analyzed to determine whether the component layout meets a predetermined performance threshold. A final component design is established when the component layout meets the predetermined performance threshold. The system and method may further compare the component layout with a set of information related to existing machine components and identify an existing machine component that has a similar layout to the component layout. In addition, the system and method may determine the costs associated with the component layout and identify changes in the component layout to reduce the costs associated with the component layout. In addition, the method provides the opportunity to capture and implement design or analysis method improvements.